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ABSTRACT

Two concepts receiving increased emphasis in today's junior colleges are the use of current, research-based techniques of instruction and the instructional accountability of faculty members. One way to insure effective implementation of these concepts in the individual junior college--as envisioned by the Junior College Division of the Regional Education Laboratory for the Carolinas and Virginia--is through use of an Educational Development Officer (EDO). This individual would be trained to assist his institution in applying contemporary research methodologies and learning psychology to the instructional situation. Currently, the Regional Education Laboratory is training EDO's to: (1) aid the faculty in developing and specifying instructional objectives, (2) serve as measurement consultants in constructing pre- and post-tests of student learning, (3) aid in the designing and subsequent revision of learning activities and teaching techniques, (4) conduct summative and formative evaluations of instructional programs, and (5) encourage research-based administrative decisions by evaluating their impact on student learning. As envisioned by the Laboratory, the EDO will function on the vice-presidential level within an institution, but his functions could be divided among existing staff members. In either case, the EDO's role is considered distinct and separate from that of the typical institutional research officer. (JO)

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THE EDUCATIONAL DEVELOPMENT OFFICER

A CHANGE CATALYST FOR TWO-YEAR COLLEGES

by

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The idea of a change agent on a college campus is not new. In a widely noted speech more than a decade ago, the Ford Foundation's Philip H. Coombs proposed that every college and university appoint a "vice president in charge of heresy" - a top-level administrator responsible for introducing new ideas on the campus.[1]

In 1965, junior college authority B. Lamar Johnson suggested that "vice presidents in charge of heresy" be appointed to the staffs of experimental two-year colleges. Johnson explained the position as follows:

> The proposal would provide a staff member--with no administrative responsibility--whose duty it would be to keep abreast of national developments and to initiate plans for exploiting them at his own institution, as well as to develop completely new plans for local use and application. Our vice president would be a "dreamer." He would attend conferences and assemble "far out" proposals. He would needle administrators and his faculty colleagues and, in turn, be needled by them. He would study the findings of research and analyze their impli-

cations for his college. He would, in short, be a harbinger and instigator of change.[2]

The common idea behind both proposals focuses on needed changes in American colleges, both two- and four-year. It is ironic that in a world of rapid change, indeed revolution, colleges have changed more slowly and with greater resistance than almost any other human institution. For years we have discussed the "time lag" between the introduction of new ideas in education and eventual adaptation on campus. As a result of his studies of the adaptation process, Paul Mort has summarized the problem as follows:

> ...change in the American school system comes about through a surprisingly slow process....Between insight into a need (for example, identification of school children's health problems) and the introduction of ways of meeting the need that is destined for general acceptance (for example, health inspection by a school doctor) there is typically a lapse of a half-century. Another half-century is required for the diffusion of the adaptation. During that half-century of diffusion, the practice is not recognized until it has appeared in 3 percent of the systems in the country. By that time--fifteen years of diffusion--or independent innovation--have elapsed. Thereafter, there is a rapid twenty years of diffusion, accompanied by much fanfare and then a long period of slow diffusion through the last small percentage of school systems.[3]

What is true of education generally is especially true in colleges and universities. The need for colleges to be more responsive to changing conditions and requirements is obvious. The need to reduce the "time lag" is mandatory.

Two-Year Colleges: Perspectives

Problems of change are especially critical for the two-year college. Often referred to as "democracy's college," the community college is the product of societal demands for greater educational opportunity for all citizens; therefore, it is more closely identified with "local" societal needs than is any other segment of higher education. Its raison d'etre is service to society. In fact, the community college stresses that institutional goals are closely related to the concept that each individual should have the opportunity to progress as far as his interests and abilities will permit. In implementing this concept, most community colleges have established open-door admissions policies--admitting any high school graduate or any person eighteen years of age or older.

The mission of the community college is idealistic. It represents an effort by society to democratize higher educational opportunities. But, embarrassment arises when we ask the searching question, "How well is the community college doing?"

The community college movement in the United States developed alongside the existing framework for higher education, rather than within it; and its philosophy is unique among institutions of higher learning.

The university and four-year college are characterized by selectivity; their highly structured, traditional programs are available only to those who possess high scholastic qualifications and who can afford the high costs of those programs.

The two-year college, on the other hand, has adopted a philosophy of educational opportunity for all--all abilities, all social and economic classes, all interests, all ages. It has, in effect, claimed to be a utopia with something for everyone. In addition to lower level studies comparable to those offered at the university, the community college provides diverse curriculum offerings in occupational areas, as well as general interest programs designed to satisfy local demands for social and cultural enrichment. All of these programs are offered at minimum--if any--expense to the student.

Unlike the selective and elitist four-year institution, the community college's democratic style, positive social philosophy, and indigenous features hold out the promise of a less hostile and more supportive environment for all of society's alienated students. And its phenomenal growth, in numbers and enrollments, demonstrates its appeal and accessibility to hitherto educationally remote segments of the total population.

To be sure, community colleges admit most students who apply. Yet, few colleges actually recruit students and, even

more serious, few of the students who venture through the open door persist for more than a few weeks. Well-documented studies reveal that our programs for nontraditional students have been poorly conceived and implemented. Few colleges are doing an adequate job with students from minority groups. In fact, in a recent article, Christopher Jencks offers this commentary on the efforts of the two-year college:

> These colleges are in many respects the embodiment of what advocates of social mobility should want. The public ones usually cost little more to attend than high school, and very few require their students to demonstrate such "middle-class" skills as literacy. They offer a variety of curricula, including some designed for the academically apathetic or inept student. Yet the existence of these colleges has not improved the competitive position of the poor in any dramatic way.[4]

Even those who represent the community college movement are increasingly concerned with the performance of these colleges in serving the educational needs of nontraditional students. Writing in the Winter 1970 issue of the Educational Record, Edmund J. Gleazer, Jr., identified several issues now facing two-year institutions, including adequate financing and faculty recruitment. Yet Gleazer concluded that the most critical issue now confronting the community colleges of this country "is to make good on the implied promise of the open door."[5]

Change: Directions

Thus, the need for change in American community colleges is obvious. While junior college pundits have been more than generous in identifying two-year colleges as "superior teaching institutions,"[6] the typical fate of the nontraditional student demonstrates that they are not. Pertinent evidence of teaching superiority in the community college is lacking. In fact, until quite recently, very few have questioned the community college's traditional conformity to instructional standards and methodologies of the conventional four-year college, despite obvious differences in respective institutional goals, programs, student populations, and faculty interests.

Those who administer and teach in community colleges recognize the lack of clear direction for their instructional endeavors--instructional improvement continues to be the most pressing need as identified by community college personnel.[7]

The initial focus for change in community college must be in the area of improved teaching--resulting in greater student retention and increased student achievement.

The EDO and Instructional Effectiveness

The Junior College Division of the Regional Education Laboratory for the Carolinas and Virginia has developed a program of preparing Vice-Presidents for Heresy. Called EDOs (Educational Development Officers), these change catalysts function in promoting greater instructional effectiveness in two-year colleges throughout the tri-state region.[8]

Drawing upon the original works of Ralph Tyler[9] and those who have subsequently added to his ideas (10, 11, 12, 13), RELCV's approach to instruction focuses on the output or product of the educational program--the learning achievements of the students who have completed the program. In short, two-year colleges in RELCV's consortium are accepting responsibility (accountability) for the learning successes and shortcomings of their students. If students do not achieve predetermined learning objectives, the instructional program has been ineffective and must be revised. It is in this context that Educational Development Officers are being trained and are functioning in community colleges throughout the three-state region.

The EDO functions to provide instructional leadership as follows:

1. Providing instructional leadership in the college.
2. Providing a mechanism for incorporating psychological findings regarding learning in the classroom teaching process.
3. Providing an environment that enhances the usefulness of research methodologies for improving instruction.
4. Increasing the number of institutional decisions and plans that are based on research data on student learning.

Although the "EDO" normally implies a single staff position, the concept is certainly applicable to more than just one

officer, because the concept is basically a body of functions that can be divided among staff members at college. In fact, the latter is desirable and probably necessary when an institution is large and the concept is in full operation.

A central feature of the EDO concept is the application of contemporary research methodologies and psychological findings concerning the learning process to the problem of improved instruction in the classroom. In this respect the role of the EDO is distinct from that of the typical institutional research officer, most of whom are occupied full-time with such tasks as: responding to survey questionnaires; completing local, state, and federal forms; conducting self-study projects for accreditation; writing proposals for grant requests; implementing information systems; and investigating plant operations.

FUNCTIONS OF AN EDO

The Education Development Officer focuses on the quantity and quality of student learning. In particular, his functions are integral to the systems approach to instruction, as conceptualized and developed by the Junior and Community College Division of RELCV. Briefly summarized, these functions are as follows:

1. To train faculty
2. To help select and state learning objectives
3. To help with measurement problems
4. To help design learning activities

5. To help redesign learning activities

6. To conduct instructional research and evaluation

7. To promote research-based decisions

With this summary, it is possible to follow the implementation of the systems approach[14] in an institution and indicate the related EDO functions at each step.

To Train Faculty

A primary function of the EDO is to train or assist in the training of faculty in developing skills and positive dispositions for the use of the systems approach. During this training, the EDO serves as an on-campus leader and provides technical help to individual teachers.

While conducting training and assisting faculty the EDO makes sure that they hold an accurate perception of the systems approach. For example, he corrects the notion that the systems approach is cold and mechanical by showing examples of how it allows for such heretical notions as self-directed and creative learning, as well as student security and achievement in learning situations that are non-authority centered and honest. He also corrects the notion that a systems approach dictates or limits curriculums by showing it to be a rationale that is applicable to any course content or learning situation. In short, the approach permits the development of attitudes and personality as well as facts and principles.

As instructors implement the approach, the EDO serves as

a research resource and guidance person to fill his role as an instructicnal leader. As a guidance person there are key questions which he continually asks. He does this for each phase of the approach.[15]

To Help Select and State Objectives

In assisting teachers to develop measurable objectives, the EDO first raises two key questions: Are the objectives clear statements of what the learner can do after successfully completing the learning activity? Are there objectives which indicate the intended learner attitude toward the subject content?

In developing objectives that are needed for curriculum content, the EDO serves as a resource person by applying literature review and survey research skills. His survey research focuses primarily on two of the three sources of curriculum objectives and content described by Ralph Tyler:[16] student needs and societal needs. Surveys on student problems, on community employment needs, on specific skills needed for various occupations, and on abilities required by transfer students illustrate how the EDO functions as a research resource person for this first phase of the systems approach. The third source, subject matter needs, is of less practical concern for the EDO.

The survey studies mentioned here would not include regular follow-up studies since they typically do not contain information that specifically suggests how to change instruction or

instructional content. Also omitted from the EDO's duties is the administration of questionnaires and instruments that have little or no chance of giving operational direction for matters related to student learning. In short, the EDO is not the guardian of data collections which are irrelevant to the product of the institution.

To Help With Measurement Problems

The second phase in the systems approach is the construction of a criterion test to be used for both pre- and post-measurements of student learning. For this phase there are two key questions: Has the test been produced with a scoring key or other information that defines adequate learner performance? Are the test items specifically related to the predetermined learning objectives?

Here, the EDO serves as a measurement consultant. Not only does he insure that tests are used ina criterion referenced manner, but he alec suggests the use of observational procedures for item sampling, for incorporating data processing machinery, and procedures for taking the measurement of complex objectives (e.g. objectives pertaining to high order cognitive skills). Finally, the EDO helps establish inter-instructor scoring reliability to promote consistent assessment of student abilities.

To Help Design Learning Activities

In helping design the learning activities, the third step

of the approach, the EDO asks questions concerning learning variables: Do the activities include frequent practice for the learner? Is there immediate knowledge of results to the learner? Are student directions understandable? Is there a sequence of small learning steps? Is the course content broken down into small units? Is multi-media used to accommodate different student learning modes? Is there provision for differential learning rates?

In addition to raising these questions, an EDO assists in the design of learning activities by suggesting approaches based on learning principles and theories. If the memorization of important facts is the task, the serial position effect[17] suggests that the facts are reviewed at the start and end of the learning unit. Furthermore, the unit might not allow closure after the presentation of the important facts--an implication of Gestalt Psychology.[18] For a concept learning task, the suggestion may be to include a greater range of examples and to avoid presenting a negative example first. These would be suggestions from Bruner's description of concept learning.[19] As a final example, the task may be solving complex problems. In this case the suggestion might be based on cognitive psychology:[20] to give the students a heuristic plan for approaching such problems.

The EDO's knowledge of instructional strategies, coupled with the application of new developments in the behavioral sciences are critical as he helps design learning activities. In fulfilling this role, he becomes the catalyst for including

psychological findings in the instructional process, the second major concern of the EDO conceptualization.

To Help Redesign the Learning Activities

The learning resource function of the EDO continues in the final phase of the systems approach. Revision of learning activities, objectives, and tests, is continuous if the systems approach is actually operable. Accordingly, the key EDO questions are the following: Did the instructor gather data on the achievement of the learners? Did the instructor interview the learners to get added diagnostic data, and did the instructor gather data on student attitudes?

To Conduct Instructional Research and Evaluation

To provide further help with the continuous revision phase of the approach, the EDO conducts summative evaluation and performs other functions which are predominantly concerned with formative evaluation. While providing imputs to help insure the attainment of learning objectives, the EDO also observes and describes the total results of the instructional system at each revision stage and investigates the efficiency of alternative learning activities when they are relevant to the same objectives.

With a self-sustaining, revisable instructional system the EDO is in an advantageous position to exploit research methodologies for the sake of increased learning or constructive revision by investigating any factor thought to influence

learning. This advantage accrues from the operationalization of learning outcomes and learning treatments. This phase relates to the third major concern of the EDO conceptualization: to provide a mechanism whereby proven methodologies (e.g., inferential studies) can be an increased service to instruction. At the same time a basic assumption is that faculty will see research less and less as something that is a bother, a threat, and generally impractical.

To Promote Research-Based Decisions

While investigating factors that influence learning, the EDO discovers that some factors involve administrative practices and procedures. Examples are admissions policies, counseling practices, placement procedures, attendance policies, grading practices, and class-withdrawal procedures.

The preceding set of factors introduces the final function of the EDO. He serves as a data resource person for the decision makers of the institution when the decisions are related to student learning. And when such decisions are made, he evaluates the results in terms of student learning. This function, in effect, is the fourth major concern of the EDO concept: to provide a mechanism to increase the number of research-based administrative decisions related directly to the product. Such related data may result from research on the following questions: How many students return to get a passing grade whe "W's" are not changed to "F's" at the end of the quarter? or, how is attrition affected when students

are not barred from taking credit courses?

Summary

To summarize the functions of an EDO, the general objectives that he strives to meet with the support of the administration are listed below. Each general objective includes examples of related specific objectives, which may vary from one institution to another:

1. The EDO will engage in activities that are directly related to what or how much students learn.
   Ex. The president will decide that the EDO will not help in the planning of the new parking lot.
2. The faculty will apply the systems approach to instruction.
   Ex. Forty percent of the faculty will attend a workshop on the systems approach.
   Ex. Two faculty members will act as informal leaders to stimulate interest.
   Ex. Seventy-five percent of the faculty will view a demonstration of the approach.
   Ex. Department chairmen will ask faculty to express their feelings about the approach.
   Ex. Each instructor will visit with an instructor in his own discipline who uses the approach.
3. The faculty will respond to the key questions that relate to a high quality systems approach (e.g. are the objectives clear phrases of what the learner can do after successfully completing the learning activity?)
4. Faculty will include objectives in the curriculum that are based on empirical studies for determining student and social needs.
   Ex. The EDO will complete a survey that indicates the need and skills required for ecological technicians.
   Ex. The social science instructors will derive ten objectives related to a representative summary of student social apprehensions.
5. Instructors, counselors, and admission officers will improve their techniques for measuring student learning.
   Ex. Instructors will use the EDO as a measurement consultant.
   Ex. English instructors will achieve consensus on how to score compositions.
   Ex. Instructors will apply the method used at Goddard College to measure the development of student autonomy.

Ex. Counselors will demonstrate the consistency between tests used for placement and course objectives.

6. Instructors will consider learning variables and incorporate learning principles in the design of instructional treatments.
   Ex. Students will not be limited by time constraints.
   Ex. Instructors will discuss mehtods of using social reinforcement for increasing student motivation.
   Ex. Students will report that they know what they need to learn for their courses.
7. Instructors will revise ineffective learning activities.
   Ex. Instructors will report achievement data for all objectives.
   Ex. Students will provide inputs for diagnosing learning activities.
   Ex. The amount of time required for students to successfully complete remedial courses will significantly decrease.
8. Each semester the EDO will report on the quantity and efficiency of student learning.
   Ex. With faculty consensus, the EDO will devise a method for indicating gaps in the total curriculum.
9. Decision makers will use data supplied by the EDO for the decision making process.
   Ex. The EDO will attend important committee meetings.
   Ex. Administrators will request information from the EDO.
   Ex. Decision makers will not perceive the EDO as a threat to their status.
   Ex. Staff at the institution will cooperate with the EDO when he is conducting or coordinating research studies.

The EDO can fulfill these functions only if 1) he has the complete support of the college president and other key administrators; 2) he is perceived by the faculty as belonging to and serving the instructional efforts of the college; and 3) the college is committed to implementing the systems approach to instruction.

FOOTNOTES

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